

Work Breakdown Structure (WBS) Dictionary for Liquid Waste Contract Request for Proposals (for Both Basic and Option Periods)

WBS	Description	Includes:
1.01.01.01.03	Waste Removal: F-Tank Farm – Operations	Sum of all 1.01.01.01.03.XX costed elements.
1.01.01.01.03.XX	Waste Removal: F-Tank Farm – Operations – Tank #XX	Waste removal operations for F-Tank Farm Tank #XX. Activities may include bulk waste removal, tank waste heel removal, tank annulus waste removal, tank cleaning, tank annulus cleaning, and sampling and characterization of residual source terms to stage tank for operational closure activities.
1.01.01.02.03	Waste Removal: H-Tank Farm – Operations	Sum of all 1.01.01.02.03.XX costed elements.
1.01.01.02.03.XX	Waste Removal: H-Tank Farm – Operations -Tank #XX	Waste removal operations for H-Tank Farm Tank #XX. Activities may include bulk waste removal, tank waste heel removal, tank annulus waste removal, tank cleaning, tank annulus cleaning, and sampling and characterization of residual source terms to stage tank for operational closure activities.
1.01.02.01.01	Tank and Associated Facility Closure: F-Tank Farm – Planning & Oversight	Planning and integrating all activities related to isolation and operational closure of F-Tank Farm tanks and associated facilities. Oversight of all activities related to isolation and operational closure of F-Tank Farm tanks and associated facilities.
1.01.02.01.02	Tank and Associated Facility Closure: F-Tank Farm – Engineering	Engineering services as required to support isolation and operational closure of tanks and associated facilities, includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, and technology integration.
1.01.02.01.03	Tank and Associated Facility Closure: F-Tank Farm – Operations	Sum of all 1.01.02.01.03.XX costed elements.
1.01.02.01.03.XX	Tank and Associated Facility Closure: F-Tank Farm – Operations – Tank #XX	Management and conduct of operational process and control activities for isolation and operational closure of F-Tank Farm Tank #XX. Includes tank isolation, deactivation of transfer lines and ventilation systems, sampling, regulatory review, filling the tank, tank internals and tank annulus with grout, capping tank risers, quality control and final inspection.

1.01.02.02.01	Tank and Associated Facility Closure - H-Tank Farm-Planning & Oversight	Planning and integrating all activities related to isolation and operational closure of H-Tank Farm tanks and associated facilities. Oversight of all activities related to isolation and operational closure of H-Tank Farm tanks and associated facilities.
1.01.02.02.02	Tank and Associated Facility Closure: H-Tank Farm – Engineering	Engineering services as required to support isolation and operational closure of tanks and associated facilities, includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, and technology integration.
1.01.02.02.03	Tank and Associated Facility Closure: H-Tank Farm – Operations-Tanks	Sum of all 1.01.02.02.03.XX costed elements.
1.01.02.02.03.XX	Tank and Associated Facility Closure - H-Tank Farm – Operations – Tank #XX	Management and conduct of operational process and control activities for isolation and operational closure of H-Tank Farm Tank #XX. Includes tank isolation, deactivation of transfer lines and ventilation systems, sampling, regulatory review, filling the tank, tank internals and tank annulus with grout, capping tank risers, quality control and final inspection.
1.02.01.01	Defense Waste Processing Facility - Planning & Oversight	Planning and oversight of facility-specific support and operation of the Defense Waste Processing Facility (DWPF) and associated facilities (excluding Glass Waste Storage facilities) to receive, prepare, and vitrify sludge and salt waste; fill canisters with vitrified waste; clean and weld seal filled canisters; and transport filled canisters to Glass Waste Storage facilities. Includes planning and oversight for long-lead item procurements, e.g., spare melter, failed melter storage boxes and construction of Failed Equipment Storage Vaults; and also for implementation of improvements to maximize DWPF waste throughput.
1.02.01.02	Defense Waste Processing Facility - Engineering	Engineering activities to maintain and improve operation of the Defense Waste Processing Facility (DWPF) and associated facilities (excluding Glass Waste Storage facilities) to receive, prepare, and vitrify sludge and salt waste, fill canisters with vitrified waste; clean and weld seal filled canisters; and transport filled canisters to Glass Waste Storage facilities. Includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; development and maintenance of facility technical baseline, resolution of technical safety issues and concerns, safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, evaluation of potential technology improvements, technology integration and development of improvements to maximize DWPF waste throughput.

1.02.01.03	Defense Waste Processing Facility - Operations – Excluding Plutonium Disposition	Management and conduct of operational process and control activities of the Defense Waste Processing Facility and associated facilities (excluding Glass Waste Storage facilities) to receive, prepare, and vitrify sludge and salt waste; fill canisters with vitrified waste; clean and weld seal filled canisters; and transport filled canisters to Glass Waste Storage facilities. Includes procurement of hardware and consumables, and maintaining a ready supply of replacement items.
1.02.01.04	Defense Waste Processing Facility - Surveillance and Maintenance	Surveillance and preventative and corrective maintenance to support operation of the Defense Waste Processing Facility and associated facilities (excluding Glass Waste Storage facilities). Surveillance includes monitoring of all areas and equipment, including waste processing equipment, vessels, sensors, motors, motor controllers, control stations, pumps, piping, valves, instrumentation, manipulators, electrical, heating, ventilating, air-conditioning, power supply systems, and all other associated equipment. Preventative Maintenance includes regular scheduled maintenance of all above. Corrective Maintenance includes repair of malfunctioning equipment and other unscheduled maintenance.
1.02.01.05	Defense Waste Processing Facility - Upgrades & Modifications	Modify or upgrade equipment and processes to support and improve operation of the Defense Waste Processing Facility (DWPF) and associated facilities (excluding Glass Waste Storage facilities) and to maximize waste throughput at DWPF. Includes the costs of replacement melter, failed melter storage boxes, and Failed Equipment Storage Vaults.
1.02.01.06	Defense Waste Processing Facility – Operations – Proposed Small-Scale Plutonium Vitrification Nonproliferation Capability	Management and conduct of operational process and control activities to support the disposition of surplus plutonium (Pu) under the proposed small-scale Pu vitrification nonproliferation capability. Operations include procurement and delivery of special ‘magazine’ equipped Defense Waste Processing Facility (DWPF) canisters to the Site M&O contractor, receipt from the Site M&O contractor of the special ‘magazine’ equipped DWPF canisters with the magazines loaded with vitrified Pu, and the cueing and processing of these canisters through DWPF to fill the remaining canister void space with high activity waste glass. This activity also includes oversight and approval of the installation of any facility upgrades required for receipt and processing of the Pu-loaded ‘magazine’ equipped DWPF canisters, and development of safety basis and procedural upgrades to support receipt, pouring and storage of Pu-loaded ‘magazine’ equipped DWPF canisters. [Note to Bidders: DOE has prescribed a total cost for this activity in the cost templates.]
1.02.02	Deliquification, Dissolution and Adjustment – Operations	Planning, oversight, engineering, operations, surveillance, maintenance, upgrade and modification of/for all activities to complete Deliquification, Dissolution and Adjustment disposition of Tank 41 waste to the Saltstone Disposal Facility. [Note to Bidders: All costs associated with this activity are to be reported under WBS element 1.03.01.02.03.02, H-Area Tank Farm Base Operations – Waste Concentration and Storage, in the Cost Templates.]

1.02.03	Actinide Removal Process /Modular Caustic Side Solvent Extraction Unit	Planning, oversight, engineering, operations, surveillance, maintenance, upgrade and modification of/for Actinide Removal Process /Modular Caustic Side Solvent Extraction Unit to treat dissolved saltcake waste and deliver a low-activity clarified salt solution waste stream as feed to the Saltstone Processing Facility and to derive a high-activity concentrated salt solution waste stream as feed to the Defense Waste Processing Facility.
1.02.04.01.01	Saltstone Processing Facility - Planning & Oversight	Planning and oversight of facility-specific support and operation of the Saltstone Processing Facility to receive and process low-activity waste for disposal at the Saltstone Disposal Facility. Includes planning and oversight of the completion of construction, operation and maintenance of the Saltstone Feed Facility.
1.02.04.01.02	Saltstone Processing Facility – Engineering	Engineering activities to maintain and improve operation of the Saltstone Processing Facility (including the Saltstone Feed Facility) to receive and process low-activity waste for disposal at the Saltstone Disposal Facility. Includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; development and maintenance of facility technical baseline, resolution of technical safety issues and concerns, safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, evaluation of potential technology improvements, technology integration and development of facility improvements.
1.02.04.01.03	Saltstone Processing Facility – Operations	Management and conduct of operational process and control activities of the Saltstone Processing Facility (including the Saltstone Feed Facility) to receive and process low-activity waste for disposal at the Saltstone Disposal Facility. Includes procurement of hardware and consumables, and maintaining a ready supply of replacement items.
1.02.04.01.04	Saltstone Processing Facility - Surveillance and Maintenance -	Surveillance and preventative and corrective maintenance to support operation of the Saltstone Processing Facility (including the Saltstone Feed Facility). Surveillance includes monitoring of all areas and equipment, including bulk materials storage areas and feed systems, dry grout mixing and delivery systems, waste processing equipment, vessels, sensors, motors, motor controllers, control stations, pumps, piping, valves, instrumentation, electrical, heating, ventilating, air-conditioning, power supply systems, and all other associated equipment. Preventative Maintenance includes regular scheduled maintenance of all above. Corrective Maintenance includes repair of malfunctioning equipment and other unscheduled maintenance.
1.02.04.01.05	Saltstone Processing Facility - Upgrade/Modify	Modify or upgrade equipment and processes to support and improve operation of the Saltstone Processing Facility (SPF). Includes completion of construction of the Saltstone Feed Facility to receive, store and supply waste feed to the SPF.
1.02.04.02	Saltstone Disposal Facility	Planning, oversight, engineering, operations, surveillance, maintenance, upgrade and modification of/for Saltstone Disposal Facility to permanently dispose of low-level radioactive waste from the Saltstone Processing Facility (SPF), develop and construct disposal vaults to assure vault space is available to support the SPF operations.

1.02.05.01	Effluent Treatment Facility - Planning & Oversight	Planning and oversight of facility-specific support and operation of the Effluent Treatment Facility to receive and process low-activity radioactive wastewater from site operations to enable the free release of treated water to the environment and transfer of concentrated low-activity waste as feed to the Saltstone Processing Facility.
1.02.05.02	Effluent Treatment Facility - Engineering	Engineering activities to maintain and improve operation of the Effluent Treatment Facility to receive and process low-activity radioactive wastewater from site operations to enable the free release of treated water to the environment and transfer of low-activity waste to the Saltstone Processing Facility. Includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; development and maintenance of facility technical baseline, resolution of technical safety issues and concerns, safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, evaluation of potential technology improvements, technology integration and development of facility improvements.
1.02.05.03	Effluent Treatment Facility - Operations	Management and conduct of operational process and control activities of the Effluent Treatment Facility to receive and process low-activity radioactive wastewater from site operations to enable the free release of treated water to the environment and transfer of low-activity waste to the Saltstone Processing Facility. Includes procurement of hardware and consumables, and maintaining a ready supply of replacement items.
1.02.05.04	Effluent Treatment Facility - Surveillance and Maintenance -	Surveillance and preventative and corrective maintenance to support operation of the Effluent Treatment Facility. Surveillance includes monitoring of all areas and equipment, including waste processing equipment, vessels, sensors, motors, motor controllers, control stations, pumps, piping, valves, instrumentation, electrical, heating, ventilating, air-conditioning, power supply systems, and all other associated equipment. Preventative Maintenance includes regular scheduled maintenance of all above. Corrective Maintenance includes repair of malfunctioning equipment and other unscheduled maintenance.
1.02.05.05	Effluent Treatment Facility - Upgrade/Modify	Modify or upgrade equipment and processes to support and improve operation of the Effluent Treatment Facility.
1.02.06	Salt Waste Processing Facility	Operation of the Salt Waste Processing Facility (SWPF) is an option. [Note to Bidders: DOE has prescribed a total cost for this activity in the cost templates.]
1.03.01.01.01	F-Area Tank Farm Base Operations - Planning & Oversight	Planning and integrating all activities related to waste receipt, concentration and storage in F-Area Tank Farm (independently of waste removal or closure operations). Oversight of all activities related to waste receipt, concentration and storage in F-Area Tank Farm tanks.

1.03.01.01.02	F-Area Tank Farm Base Operations - Engineering	Engineering activities to maintain and improve operation of F-Area Tank Farm (independently of waste removal or closure operations) to receive waste in support of ongoing site activities, concentrate waste influents, and store waste in support of ongoing site activities. Includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; development and maintenance of facility technical baseline, resolution of technical safety issues and concerns, safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, evaluation of potential technology improvements, technology integration and development of facility improvements.
1.03.01.01.03.01	F-Area Tank Farm Base Operations - Waste Receipt	Management and conduct of operational process and control activities of the F-Area Tank Farm to receive waste in support of ongoing site activities (independently of waste removal or closure operations). Accept and store appropriately characterized waste material as may be directed by the Contracting Officer.
1.03.01.01.03.02	F-Area Tank Farm Base Operations - Waste Concentration and Storage	Management and conduct of operational process and control activities of the F-Area Tank Farm to concentrate and store waste.
1.03.01.01.04	F-Area Tank Farm Base Operations - Surveillance and Maintenance -	Surveillance and preventative and corrective maintenance to support operation of the F-Area Tank Farm (independently of waste removal or closure operations). Surveillance includes monitoring of all areas and equipment, including waste temperature and level monitoring equipment, waste transfer lines, diversion boxes, tank and piping integrity, motors, motor controllers, control stations, pumps, piping, valves, sensors, instrumentation, electrical, heating, ventilating, air-conditioning, power supply systems, cooling water systems, evaporators, sewer, water, drainage facilities and all associated equipment Preventative Maintenance includes regular scheduled maintenance of all above. Corrective Maintenance includes repair of malfunctioning equipment and other unscheduled maintenance.
1.03.01.01.05	F-Area Tank Farm Base Operations - Upgrade/Modify	Modify or upgrade equipment and processes to support and improve operation of the F-Area Tank Farm (independently of waste removal or closure operations).
1.03.01.02.01	H-Area Tank Farm Base Operations - Planning & Oversight	Planning and integrating all activities related to waste receipt, concentration and storage in H-Area Tank Farm (independently of waste removal or closure operations). Oversight of all activities related to waste receipt, concentration and storage in H-Area Tank Farm tanks.
1.03.01.02.02	H-Area Tank Farm Base Operations - Engineering	Engineering activities to maintain and improve operation of H-Area Tank Farm (independently of waste removal or closure operations) to receive waste in support of ongoing site activities, concentrate waste influents, store waste, complete Tank 48 waste disposition activities, and prepare sludge waste feed for DWPF. Includes design of items to be constructed, design reviews, systems engineering, configuration management, quality assurance and control; development and maintenance of facility technical

baseline, resolution of technical safety issues and concerns, safety engineering to include nuclear safety, criticality analyses, occupational safety; design authority responsibility, evaluation of potential technology improvements, technology integration and development of facility improvements.

1.03.01.02.03.01	H-Area Tank Farm Base Operations - Waste Receipt	Management and conduct of operational process and control activities of the H-Area Tank Farm to receive waste in support of ongoing site activities (independently of waste removal or closure operations). Accept and store appropriately characterized waste material from H-Canyon, ETF operations, and any other waste material as may be directed by the Contracting Officer.
1.03.01.02.03.02	H Tank Farm Base Operations - Waste Concentration and Storage	Management and conduct of operational process and control activities of the H-Area Tank Farm to concentrate and store waste.
1.03.01.02.03.03	H Tank Farm Base Operations – Tank 48 Waste Disposition	Complete disposition of Tank 48 waste begun by others and return tank to unrestricted tank farm service. [Note to Bidders: DOE has prescribed a total cost for this activity in the cost templates.]
1.03.01.02.03.04	H Tank Farm Base Operations – Sludge Waste Feed Preparation	Prepare sludge waste feed for the DWPF by removing soluble constituents from the sludge waste removed from tanks.
1.03.01.02.04	H-Area Tank Farm Base Operations - H Tank Farm - Surveillance and Maintenance -	Surveillance and preventative and corrective maintenance to support operation of the H-Area Tank Farm (independently of waste removal or closure operations). Surveillance includes monitoring of all areas and equipment, including waste temperature and level monitoring equipment, waste transfer lines, diversion boxes, tank and piping integrity, motors, motor controllers, control stations, pumps, piping, valves, sensors, instrumentation, electrical, heating, ventilating, air-conditioning, power supply systems, cooling water systems, evaporators, sewer, water, drainage facilities and all associated equipment Preventative Maintenance includes regular scheduled maintenance of all above. Corrective Maintenance includes repair of malfunctioning equipment and other unscheduled maintenance.
1.03.01.02.05	H-Area Tank Farm Base Operations - Upgrade/Modify	Modify or upgrade equipment and processes to support and improve operation of the F-Area Tank Farm (independently of waste removal or closure operations).

1.03.02	Glass Waste Storage Facilities	Planning, oversight, engineering, operations, surveillance, maintenance, upgrade and modification of/for Glass Waste Storage Buildings # 1&2 and any future Glass Waste Storage Building upon its availability for operation to store Defense Waste Processing Facility waste canisters pending availability of a licensed Federal Repository.
1.03.03	Canister Shipping Facility Interface, Coordination, and Operations	[Note to Bidders: No costs shall be proposed for this activity.]
1.03.04	Salt Waste Processing Facility Interface and Coordination	Includes interfacing and integrating activities with other site contractors throughout the design, construction, startup and first year of radioactive operations of the Salt Waste Processing Facility (SWPF). Includes identifying necessary interfaces between the SWPF Project and the Liquid Waste System, identifying appropriate actions to assure the interfaces are fully addressed, and agreement as to respective responsibilities for addressing the interfaces. The interfaces to be addressed include both physical and operations and will necessitate the development of appropriate procedures to assure a smooth transition of SWPF operations into the Liquid Waste System.
2.0		[Note to Bidders: See Section C.2, Liquid Waste Program Support, for workscope definition for all WBS 2.0 elements.]